

SYSTEM AND METHOD FOR LOCATING
A MOBILE STATION IN A WIRELESS NETWORK

ABSTRACT OF THE DISCLOSURE

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10 A system and method is disclosed for locating a mobile
station in a wireless network. A distance unit associated
with a base station determines a one way travel time of a
range signal from the base station to the mobile station
and multiplies the one way travel time by the speed of
light to obtain the distance from the base station to the
mobile station. The one way travel time is equal to one
half of a quantity that is equal to a two way travel time
of a range signal minus a time value of a random backoff
parameter of the mobile station. The distance resolution of
15 the system is approximately two hundred forty four meters.